

**Division 26 – Electrical**  
**Section 26 05 19 – Wire and Cable**  
**Type MC Feeder Cable – Aluminum Conductors**

**PART 1 – GENERAL**

**1.1 SECTION INCLUDES**

- A. Feeder and Services: Type MC Cable for use as services and feeders.
- B. General Applications: Type MC Cable may also be used in the following general applications per based on the National Electrical Code (NEC):
  - 1. For services, feeders and branch circuits
  - 2. For power and lighting
  - 3. Indoors
  - 4. Exposed or concealed
  - 5. In cable tray where identified for such use
  - 6. In a raceway
  - 7. In dry locations and embedded in plaster or against other masonry
  - 8. Jacketed MC Cable may be used in wet locations, either direct burial, in underground conduit, or overhead.

**1.2 SUBMITTALS**

- A. Product Data: Submit manufacturer's product data that materials comply with specified requirements and are suitable for intended application.
- B. Installation Instructions: Manufacture's installation instructions shall be included in submittal. Industry guides may supplement the manufacturer's instructions.
- C. Manufacturer: Type MC Cables for circuits, feeders and services shall be supplied from a single manufacturer.

**1.3 REQUIRMENTS**

- A. Underwriters Laboratories: Type MC Cable shall meet the following Underwriters Laboratories (UL) standards.
  - 1. UL 1569 Standard for Metal-Clad Cables
  - 2. UL Standard 83 for Thermoplastic-Insulated Wires and Cables or UL Standard 44 for Thermoset-Insulated Wires and Cables
  - 3. UL Standard 1479 Standard for Fire Tests of Through-Penetration Firestops.
  - 4. UL Classified 1, 2, and 3 Hour Through-Penetration Firestop Systems.

- B. National Electrical Code: Type MC Cable shall meet the following NEC requirements.
  - 1. NEC Articles 230, 300, 330
  - 2. NEC Class I Div. 2, Class II Div. 2, & Class III Div. 1 Hazardous Locations.
- C. Federal Specification: Type MC Cable shall meet Federal Specification A-A59544.
- D. Flame Test: Type MC Cable shall pass IEEE 1202 (70,000 BTU/hr) Vertical Cable Tray Flame Test.

## **PART 2 - PRODUCTS**

### **2.1 MANUFACTURER**

- A. Southwire Company, One Southwire Drive, Carrollton, Georgia, 30119. Website [www.southwire.com](http://www.southwire.com).

### **2.2 TYPE MC CABLE CONSTRUCTION**

- A. Phase Conductors
  - 1. Aluminum conductors shall be compact stranded AlumaFlex™ AA-8176 aluminum alloy.
  - 2. Insulation: The conductors shall be constructed with XHHW-2 rated 90°C dry / 90°C wet or THHN/THWN insulation rated 90°C dry / 90°C wet and rated for 600 volts.
- B. Equipment Grounding Conductor
  - 1. A bare compact aluminum grounding conductor shall be cabled with aluminum phase conductors.
  - 2. Service: When installed as a service, the grounding conductor size shall be based on the largest phase conductor.
  - 3. Feeder: When installed as a feeder, the grounding conductor size is based on the rating of the over-current device.
  - 4. Parallel Installations: When used in parallel installations, the equipment-grounding conductor shall be specified in accordance with NEC Section 250.122.
- C. Cable Sheath
  - 1. Armor: Cable shall have an interlocked aluminum armor helically formed around the conductor assembly.
  - 2. Jacket: When specified, the assembly shall be covered with a black, flame retardant, sunlight resistant jacket.

## **2.2 TYPE MC CABLE FITTINGS**

- A. Type MC Cable fittings for feeder cable shall be supplied by cable manufacturer. The fittings shall be UL-listed for use with metal-clad cable, Type MC, employing interlocking aluminum tape.

## **PART 3 - INSTALLATION**

### **3.4 INSTALLATION**

- A. Neat and Workmanlike Installation: MC Cable shall be installed parallel or perpendicular to walls. No diagonal runs shall be permitted. Additional supports shall be used when the cable is exposed. *[The use of a basket type wire mesh support system or similar system should be used when the cable is exposed.]*
- B. Manufacturers Instructions: Type MC Cable shall be installed per the manufacturers written installation instructions. Industry guides may supplement the manufacturer's instructions.
- C. Field Support: Manufacturer shall provide, when requested, field engineering support for MC Cable installation.
- D. Manufacturer: Type MC Cables for circuits, feeders and services shall be supplied from a single manufacturer.
- E. Fittings: Type MC Cable fittings supplied by cable manufacturer shall be used for all feeder cable. The fittings shall be UL-listed for use with metal-clad cable, Type MC, employing interlocking aluminum tape.
- F. Securing and Supporting: MC Cable shall be secured and supported at intervals not exceeding six feet unless otherwise permitted in the National Electrical Code.
- G. Minimum Bending Radius: Bends in MC Cable shall be made so that the cable will not be damaged. The radius of the curve of the inner edge of any bend should not be less than seven times the cable diameter.
- H. Firestop Systems: MC Cable shall be installed per the cable manufacturer's Through-Penetration Firestop Systems listing by Underwriter Laboratory.

### **3.1 SPECIFIC USES**

- A. Type MC Cable may be used in cable tray, as service entrance cables and outside of buildings based on the following NEC articles.
  - 1. MC Cable installed in cable tray shall comply with Article 392 of the National Electrical Code.

2. MC Cable installed, as service-entrance cable shall comply with Article 230 of the National Electrical Code.
3. MC Cable installed outside of buildings shall comply with Articles 225 and 396 of the National Electrical Code.

### **3.2 USES NOT PERMITTED**

- A. Type MC Cable should not be used in wet locations, either direct burial, in underground conduit, or overhead unless the cable is jacketed and contains conductors rated for wet locations.

### **3.3 AMPACITY**

- A. The ampacity of Type MC Cable shall be determined in accordance with Article 310.15 of the National Electrical Code. The installation should not exceed the ratings of the terminations and equipment.

End Section 26 05 19